

APPLICATION OF THE PRINCIPLES OF ADVERTISING
TO THE DEMAND FOR WHEAT AND OTHER FOODS

by

WILLIAM LEE RUGGELS

B. S., Kansas State College
of Agriculture and Applied Science, Manhattan, 1956

A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

LD
2668
T4
1957
R 82
C 2
documents

11

TABLE OF CONTENTS

INTRODUCTION	1
A SHORT REVIEW OF THE PRINCIPLES OF ADVERTISING	2
A Short History of Advertising	2
Some Effects of Advertising	4
The Kinds of Advertising	8
The Application of Psychology to Advertising	9
An Explanation of Advertising Appeals	11
A Short Discussion of Consumer Beliefs	12
A SHORT REVIEW OF WHEAT ADVERTISING CAMPAIGNS	14
The Advertising of Wheat in Oregon	14
The Advertising of Wheat in Nebraska	21
The Advertising of Wheat in Kansas	27
A SHORT DISCUSSION OF THE EFFECTS OF AGRICULTURAL RESEARCH	28
A SHORT REVIEW OF ADVERTISING CAMPAIGNS TO INCREASE THE DEMAND FOR SELECTED FARM PRODUCTS	29
The Advertising of Tobacco	30
The Advertising of Cigarettes	31
The Advertising of Cigars	32
The Advertising of Sugar	33
The Advertising of Oranges	34
The Advertising of Milk	35
The Advertising of Eggs	36
A SHORT REVIEW OF SOME FOOD PREFERENCES OF CONSUMERS	36
A SHORT DISCUSSION OF THE PRESENT SITUATION OF THE WHEAT INDUSTRY	37
SUMMARY AND CONCLUSIONS	43
ACKNOWLEDGMENT	47
LITERATURE CITED	48

INTRODUCTION

This study was initiated to bring together principles of advertising and to consider their application as a means of increasing the demand for wheat.

This study was prompted largely by the current popular interest in advertising as a way to dispose of farm surpluses. The pioneering advertising program of the California Fruit Growers Exchange and such later advertising programs as those of the American Dairy association and other commodity groups have given farmers a sense of participation in selling their products. A part of the purpose of this study was to isolate principles which might suggest whether more tangible returns can be expected to accrue to farmers from such promotional programs. Currently, there is no alternative way to test hypotheses about the success or failure of campaigns to advertise farm products without considerable expenditure of time and money.

The procedure was: (a) the field of advertising was examined to determine the general prerequisites of a successful advertising campaign, (b) present campaigns to advertise wheat were examined to indicate what has been done already, (c) past uses of advertising in attempts to increase the demand for food products were examined to see what might be the implications for advertising of wheat, (d) the current situation of the wheat industry was examined to see what influences advertising might have to overcome in order to be successful, and (e) the outcomes of these various examinations were combined and conclusions drawn.

Too little research has been undertaken to determine the success or failure of advertising campaigns designed to increase the demand for

specific food products. Below, reference is made to the scattered information available on the success of such advertising campaigns. Advertising of wheat apparently is a new development. At least two states, Oregon and Nebraska, have recently begun to utilize advertising in connection with the sale of the wheat grown in their particular state, and the 1957 Kansas legislature passed a law to set up a similar plan for Kansas wheat. Literature on this development is scant and no research study has been completed by either Nebraska or Oregon to determine the degree of success of either campaign.

A SHORT REVIEW OF THE PRINCIPLES OF ADVERTISING

It has sometimes been asserted that our economic system would be better off without advertising. This argument was not taken up. Rather the fact of advertising was taken as given, and an attempt was made to estimate the wisdom of its expansion in a specific situation.

A Short History of Advertising

Until after the American Civil War, advertising consisted primarily of notices and announcements. National advertising of the type so forcefully in evidence today did not develop until national communication systems were perfected. But, on the other hand, the British Museum contains a piece of Egyptian papyrus, 3,000 years old, on which is written an advertisement asking for the return of a runaway slave (Brewster, et al 6). Signboards, another method of advertising, first appeared in ancient Rome where, for example, a thirsty citizen could recognize a wine shop by the sign of the bush (6). Present-day real estate agencies and

politicians can make little improvement on some of the advertisements found in the ancient buried city of Pompeii. For example, two quoted by Brewster, et al (6) as translated from the original Latin are:

To rent. From the first day of July, shops with flowers over them; finer upper chambers and a house in the Airius Pollio block, owned by Gnaeus Marius.

Make Publius Furius Aedile, I beg of you; he's a good man. The sneak thieves request the election of Vatia as Aedile.

Even before Adam Smith penned The Wealth of Nations, advertisers were trying to influence the demand curve for goods and services. Mott (21) found that in 1759, Dr. Samuel Johnson said:

The man who first took advantage of the general curiosity that was excited by the siege of battle to betray readers of news into the knowledge of the shop where the best puffs and powder were to be sold was undoubtedly a man of great sagacity and profound skill in the nature of men.

The sage Dr. Johnson was human enough, however, to maintain that, "The trade of advertising is now so near to perfection that it is not easy to propose any improvement," (MacDougall, 16).

The use of signboards, placards, handbills, pamphlets, newspapers etc. was developed in England and brought to the United States by its early settlers. The first paid advertisement in an American newspaper appeared on November 4, 1762, in the second issue of the Boston Newsletter, the first continuously published American newspaper (Mott, 21). It concerned two misplaced anvils weighing between 120 to 140 pounds each.

Early American advertisers used the technique of appeal to their reader's emotions. An advertisement in the Connecticut Journal of Nov. 5, 1777, headed "Ragged, Barefooted Soldiers," asked towns that had not yet met clothing quotas to do so in order that Revolutionary soldiers could have the clothing before winter set in, (21).

The period between the Civil War and 1900 saw the development of a national communications system and great industrial expansion. Patent medicine and soap manufacturers were the major advertisers. Harley T. Procter named Ivory soap in 1882 and the firm of Procter & Gamble began to declare with national advertising that its product was 99 and 44/100 percent pure (21).

In 1903, Professor Walter Dill Scott of Northwestern University, through articles in the "Atlantic Monthly" and his book, The Theory of Advertising, related advertising to psychology (21).

The competitive nature of products was emphasized by the 20-million-dollar advertising and promotional campaign by Lucky Strike in 1928. The campaign challenged the whole confectionary industry with the slogan, "Reach for a Lucky instead of a Sweet," (21).

Today, advertising is so completely accepted in non-academic circles that after a 17-day-long strike that halted publication of Cleveland, Ohio, newspapers, a reporter could assert without mention of other possible causes that, "Without newspaper advertising, local department-store sales had dropped 14 percent," (24). Perhaps this uncritical acceptance of the effectiveness of advertising has its counterpart in present-day farm commodity sales programs.

Some Effects of Advertising Campaigns

The ideal outcome of an advertising campaign, at least as far as the selling of tangible goods and services is concerned (more and more, advertising is being utilized to sell ideas) is to increase the demand for that product or service, to such an extent above what it would have been without the advertising, that the net return to the advertiser from the

sale of this good or service being advertised more than pays for all additional costs, including advertising, which occur. Boulding (5) stated:

In order to increase sales at least one of two things must be done. Either the price must be lowered in order to tempt buyers into buying more, or the buyer must be persuaded to buy more at each price. The process of persuading the buyers to buy more at each price is called "sales promotion." The total of expenses plus normal profit involved in sales promotion is called "selling costs."

Here, the word "advertising" will be used rather than "selling costs" because of its popular usage. The basic requirement before an advertising campaign can be termed successful is that resulting net returns more than pay for additional costs which include the advertising costs. A successful advertising campaign may shift the present demand curve for a product advertised upward and to the right so that the same amount of goods or services can be sold for a higher price, or a greater amount for the same price. This is shown in Fig. 1.

In Fig. 1, D_1 is the demand curve for a product before it is advertised and D_2 is the demand curve for the same product after an advertising campaign has been undertaken. Before the advertising campaign, the quantity Q_1 of the product could be sold at price P_1 . After the advertising campaign, the quantity Q_2 (more than Q_1) could be sold at the same price, P_1 or the quantity Q_1 could be sold at a higher price P_2 . In either case the gross revenue from the sale of the product would be greater than the gross revenue before the campaign was undertaken. If the net revenue after the advertising campaign would be increased, the campaign would be successful. Since many demands are no more static than is our society, they can and do change in the absence of advertising. An advertising campaign that keeps a demand

from falling as far as it would have had not the campaign been launched would be successful if the net returns from the sale of the product after it was advertised and after the advertising costs were taken out, were more than the net returns would have been had not the product been advertised. This is illustrated in Fig. 2.

In Fig. 2, D_1 is the demand curve of a product for which the demand is falling; D_3 is the demand curve that would result as the demand for that product continues to decrease without advertising, and D_2 is the demand curve for that product that would result over the same period of time if advertising were undertaken to slow down the fall in demand. Q_1 is the quantity that can presently be sold at price P_3 . As the demand falls to D_3 , the quantity that can be sold at price P_3 will drop to Q_3 unless advertising is utilized to sell quantity Q_2 at price P_3 . On the other hand, P_1 is the price that would be necessary in order to sell quantity Q_1 as the demand falls to D_3 , unless advertising is utilized to sell quantity Q_1 at price P_2 . If the net revenue after advertising costs were taken out would be greater at the advertising induced demand D_2 than would be the net revenue at demand D_3 , the advertising campaign can be considered successful.

Figure 2 can be used also to demonstrate what occurs when advertising is applied to a product whose demand is rising without advertising. D_3 , in this case, is the demand curve for the product at the present time; D_2 is the demand curve that would result even if advertising were not utilized; D_1 is the demand curve for the product that would result over the same period of time if advertising were undertaken. The gross revenue

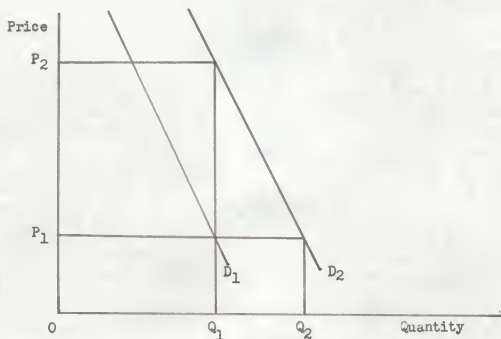


Fig. 1. A static demand curve before and after an advertising campaign.

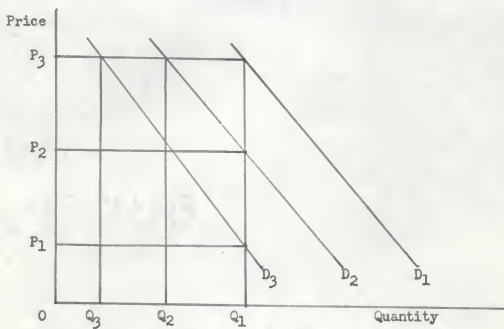


Fig. 2. A moving demand curve before and after an advertising campaign.

that would result at demand D_1 is greater than the gross revenue that would result at demand D_2 over the same period of time. If net revenue after advertising would be greater also, then the advertising campaign would be a financial success.

With present methods of analysis, it is very difficult to determine whether a specific advertising campaign for a product whose demand is falling has been successful because of the difficulty of ascertaining what would have been the result in a particular situation had not a specific campaign been undertaken. For this reason, advertising campaigns are often considered successful only when the demand for the advertised product increases.

The Kinds of Advertising

At this point, it is necessary to give a specific definition of advertising as used in this study. Advertising, like many words encompassing a broad field, is hard to define. Brewster, et al (6) called it:

The paid dissemination of information for the purpose of selling or helping to sell commodities and services or of gaining the acceptance of ideas that may cause people to think or to act in a certain way.

In this study advertising will be considered as paid promotional activities to cause persons to buy a particular good or service.

Advertising takes many forms such as posters, painted displays, electric spectacles, handbills, mailed matter, "ads" in newspapers and magazines, and commercials over radio and television. In any form, an advertisement is an attempt to show that an advertiser's good or service can satisfy a consumer's want which the consumer may or may not be aware he has.

Advertisements fall into two broad categories—product introduction, and product competition. If an advertiser has a new product to sell, he must introduce it to the public by showing each potential consumer that he, the consumer, has a want he did not appreciate; that that want can be filled by the advertiser's new product; and that that product is now available (Kleppner, 13). Competitive advertisements are used by two or more producers competing for an existing market. A third division of advertising—retentive—is sometimes made (13). An example of retentive advertising was that type of advertising used during World War II by manufacturers of consumer goods who were engaged completely in producing materials of war but who at the same time wished to keep their name before the public for post-war selling purposes.

The Application of Psychology to Advertising

Every advertisement represents an attempt to influence human behavior—usually to cause the purchase of a good or service. Buying responses by the advertising audience are the result of motivation (Lucas and Britt, 15). More and more, advertisers are applying psychology in their advertising as they attempt to use appeals that will cause a person to want a particular good or service and therefore acquire it.

To understand buying, one must first understand some of the things involved in motivation. Few, if any psychologists can agree on one particular list of motives that are universal. But, in the way of a general definition, it can be said that all voluntary acts and all established habits are motivated; that motivation involves present satisfaction, and that reasons are not an adequate basis of motivation (15).

It follows then, that motivated activity must satisfy an individual or he will change to an activity which is more satisfying. If a good or service has the capacity to give enough human satisfaction to justify the cost of producing it, then it should be possible to motivate the purchase of that good or service (15). This is why psychology has been found useful in advertising.

Lucas and Britt (15) said that much present day advertising represents an appeal to human motives,

First, to get the audience to attend to the message, and then to "stir" a response favorable to buying the product or service. In order to plan advertising intelligently, it is desirable not only to understand some basic principles of motivation, but also to know how to apply these principles, which are complex.

and:

the more clearly the advertising man understands the kind of satisfaction which he is trying to depict, the more likely he will succeed in motivating the buyer. The criterion used by the prospective buyer is always the satisfaction which he can hope to gain.

also:

emphasis on the term satisfaction does not mean that every advertisement must make the audience contemplate a pleasant result...sometimes the actual buying response may have no association with conscious satisfactions to be gained. It may be simply the expression of a habit which appears to be satisfying only when an interruption brings it to consciousness.

The correct use of psychology in determining the content of an advertisement is very important, but psychology must also be applied in determining the form, type, composition, color, wording, sound, etc. of a particular "ad" to get the attention of the reader so that the message can be delivered. Most advertisers seem to be in some agreement as to the necessity of motivation of the buyer. A review of the advertisements in a

current magazine will do much toward verification of the preceding statement.

AN Explanation of Advertising Appeals

People have wants. Advertisers to a great extent make use of these wants to motivate buyers by attempting to show how their products can satisfy wants of buyers. Advertisers do not create wants; they are there already. As has been noted above, an advertiser tries to show the consumer that he has a want (which he may not realize he has) and that the advertiser's product can satisfy that want.

One list of basic wants common to all lists of wants made by psychologists, includes a desire for these eight basic things: food and drink, comfort, attractiveness to the opposite sex, welfare of loved ones, freedom from fear and danger, superiority, social approval, and longer life (Hattwick, 9). These eight basic wants are responsible for more sales than all other wants combined (9).

However, many successful advertising themes are based on secondary wants—wants that are learned. A list of these secondary wants include: health, efficiency, convenience, dependability, quality, economy, profit, style, beauty, cleanliness, curiosity, and information (Lucas and Britt, 15).

Hattwick (9) said that:

In the purchase of goods or services, the strongest underlying factor is the want for the product or service. Purchases based on wants are often impulsive, unreasoned, emotionally made.

Many advertisers, recognizing these facts, have shifted their emphasis in recent years from appeals based on reason to appeals based on emotional wants.

In a broad sense, the fundamental principle that buying activity is always motivated activity remains unchanged.

The advertiser needs to have some idea of the want he is attempting to satisfy in order to successfully motivate the buyer to cause him to buy the advertiser's product.

A Short Discussion of Consumer Beliefs

To further clarify the matter, a few words are needed about the strange creature that is the object of all advertising expenditures—the consumer. One rule, which most advertisers will agree has been verified by experience, is that "in any campaign to 'educate' the public, most of the pupils will flunk," (Hepner, 10). Before money is spent on any advertising campaign, the advertiser would be wise, and in most cases economically better off, to determine, by examining data already available, and by making consumer surveys, if his product and his planned campaign will appeal to the consumer. Advertising of wheat is no exception. "The advertiser does not, as a rule educate consumers—he studies trends in consumer behavior and connects his message with the established trends," (10).

Before spending money for advertising, the advertiser should know such things as trends in population and occupations, the part women play in influencing and making purchases of his product, the age and educational level of his consumers, the income of his consumers, and an assortment of other facts. To begin an advertising campaign blindly can be a very costly and wasted undertaking.

Lest anyone believe that consumers are a logical, rational, body that can be easily influenced by an advertisement appealing to "reason" he should consider the following buying beliefs of consumers which are a few of the many statistically verified and now on record.

In New York City most people prefer white eggs, and these often bring a higher price, but Bostonians prefer them brown... Green asparagus is preferred in Boston; White in Chicago... Northerners consume more rolled oats per capita than Southerners (Hepner, 10).

Sixteen per cent of married women who prefer double beds do so because they dread sleeping alone or in cold beds (Hepner, 10).

It is not unusual for a food advertiser to find that an advertisement with a recipe will be seen and read by three times as many women as a similar advertisement without a recipe (Hepner, 10).

Only four out of ten persons over twenty-five years (advertisers' customers) even started high school (Hattwick, 9).

This survey of the field of advertising has indicated that advertising is not a new development, but that the present methodology of the advertising industry has evolved after many, many years of experience. It was concluded, that the present principles of advertising are believed by those who employ them to improve their economic status, to be the most profitable possible. Therefore, it was assumed that from an economic point of view, the "rules" of advertising should not be violated by a potential advertiser unless he has sufficient proof that the rule which he intends to violate in the hopes of improving his own economic status, is not correct despite the confidence with which it is held by the industry. Most advertisers agree that psychology is useful in advertising; that people have wants to which advertisers can appeal; that most successful advertising campaigns show how a product can satisfy existing wants; that usually advertising cannot "educate" the public to buy a product; that consumers are not rational; and that it would be wise before an advertising campaign is launched, to make consumer surveys to see whether consumers have wants which they can be convinced would be satisfied by the product of the potential advertiser.

A SHORT REVIEW OF WHEAT ADVERTISING CAMPAIGNS

At present, wheat commissions in at least two states—Oregon and Nebraska—are actively engaged in advertising wheat, while the 1957 Kansas legislature passed legislation to set up a similar program for Kansas. Following is an account of what has been done in these states, with Oregon, which has the older program, being considered in more detail.

The Advertising of Wheat in Oregon

The Oregon Wheat Growers league was organized in 1926. In 1947, with urging from this group, the Oregon legislature enacted the Oregon Wheat Commission law. This law created a commission of five grower members and authorized a tax of five mills ($1/2$ cent) a bushel on all Oregon-grown wheat sold commercially (28).

The spending of funds obtained from this tax has been divided into two categories—(1) research and study, and (2) education and publicity. The division was made for budgetary purposes. The commission has found that there is considerable overlapping and it is rather difficult to keep a particular project entirely within either category (Taylor, 27).

The Commission has been spending an average of \$100,000 a year, half of which has been spent on research in an attempt to develop easier mill-
ing, better baking, more smut-resistant varieties of wheat (28).

Wheat is the main crop on 2,000,000 acres of land in Oregon (28). Annual value of the wheat crop to the grower is around \$55,000,000, making it the largest farm crop in the state (28). About 95 percent of the crop is soft wheat. Club wheats make up seventy percent of the total, with Elmar the leading single variety (28). Only about 25 percent of Oregon's wheat crop is used in the state. The picture is the same for Washington and

Northern Idaho, which with Oregon make up the Pacific Northwest wheat-growing region. At one time the region had a profitable market for its cake flour and soft wheat in eastern and southeastern states, but this market was lost because of high freight rates. Overseas markets, therefore, appear as the main outlet (28). Japan now is the biggest single customer of this region's wheat growers, taking 30,000,000 to 40,000,000 bushels a year. The Philippines take around 4,000,000 bushels in the form of flour. Formosa, Korea, Pakistan, and India are buying Oregon wheat. The commission, among other activities toward developing this market, brought the head of the home economics department of the Philippines to Oregon State college on a fellowship for training, and sent the secretary of the Wheat League, Richard Daum, on a market survey trip through the Far East (28).

A break-down of the expenses of various Wheat Commission activities is shown in Table 1.

The division of the various projects in the two categories of Table 1 was made on the basis of the apparent nature of the projects.

Some of the projects included under Education and Publicity are not advertising in the conventional sense of the word, but inasmuch as they are neither research nor study, and were undertaken for the purpose of expanding the demand for wheat, they will be discussed below.

The 4-H cake baking contest was set up in 1948 when the commission asked the Oregon State Extension Service to organize and direct a cake baking contest at county fairs and at the annual Oregon State Fair, with contestants to be required to use flour milled from Oregon soft-white wheat (26). The commission provided funds for transportation to the state fair, and subsistence of one contestant from each county and the city of Portland, and provided \$200.00 yearly for prizes on the state level. Cost,

Table 1. Expenses of the Oregon Wheat Commission from 1948 through July 1, 1957.

Purpose	\$	Cost
Research and study		
Northwest Wheat Statistics Project	\$	27,368.68
Western Wheat Quality Laboratory		54,250.00
Pacific Northwest Grain & Grain Producers Association		80,000.00
Analysis of Weather Data		21,858.00
Smut Research		17,000.00
Grain Alcohol-Motor Fuel Investigations		500.00
Agricultural Research Foundation		47,000.00
Cattle Feeding Experiment		100.00
Contract with Oregon Wheat Growers League		<u>295,133.89</u>
Total		\$543,210.57
Education and Publicity		
4-H Cake Baking Contest	\$	4,832.75
Exhibits and Displays		10,867.33
Women's Christian College, Madras, India		13,266.00
Processed Wheat Promotion (Bulgor)		2,180.00
Milk 'n Donut Campaign		492.99
Wheat Growers' Public Information Program		<u>23,000.00</u>
Total		\$ 54,639.07

in the eight years, 1948 through 1956, since the contest has been conducted has been \$4,182.75 and the anticipated expense for 1956-57 is \$650. (26).

Exhibits and displays were prepared by the wheat commission for use at such events as the Oregon State Fair, and the National Association of Wheat Growers conventions. Cost of such activities for a five-year period from 1950 to 1954 was \$5,745.07. The cost for 1955, which included exhibits and displays at the state fair, a Lane county fair, a U.S.D.A. wheat exhibit in Washington, D. C., a fair in Osaka, Japan, and the National Association of Wheat Growers display in Texas was \$5,122.26 (26).

The commission provided funds to assist in supporting a project by the Women's Christian college of Madras, India. Under this project, locally trained Indian food demonstrators have been visiting villages in the Madras vicinity to show housewives how to prepare wheat, using the fuel and cooking facilities as they exist. Cost of this project in a six-year period from 1951 to 1956 was \$10,766. The commission has a contract to continue financial assistance of this type until June 30, 1957. Anticipated expenses for 1956 to 1957 were to be \$2,500. (26).

The commission spent \$2,180 promoting a processed wheat, called Bulgor (26), a wheat food long eaten in the Middle East. It is made by boiling, drying, and cracking wheat. A flouring mill began making this processed wheat in 1955 in a new plant in Seattle after the commission worked out an arrangement with the U. S. Department of Agriculture to furnish the wheat for trying the product in Far Eastern countries. Processed wheat has been introduced to the domestic market by the company under the trade name "Ala." The commission (26) said:

Housewives in this area are finding processed wheat with its quick-cooking characteristics (just 15 minutes) and distinctive flavor to be an exciting new food discovery, opening many new menu variety opportunities. The basic recipe "pilaf", is an exotic dish made with bulgour, chopped onions, seasonings and cooked in stock or bouillon. Processed wheat may also be used for breakfasts, stuffing roast fowl, an extender for meats, salads, soups, other special dishes, and even desserts.

Determining the number of housewives who actually agree with the above statement would give a valuable piece of information for the commission to consider in planning future promotion of this wheat food. The commission has promoted processed wheat with publicity, displays, samples, special dinners, and by encouraging its use by living groups on college campuses and in state institutions (26).

The Milk 'n Donut campaign was carried out jointly with the Oregon Dairy Products commission to prepare and distribute suitable material for use in this campaign in October, 1955. Cost to the wheat commission was \$492.99 (26).

In its Wheat Grower's Public Information Program, the commission employed the services of an advertising agency to carry on a promotional, educational, and public information campaign which was started in October, 1955 and was to continue for six months. The Wheat Commission, at a special meeting on January 31, 1956, decided to continue this program for another six months. The total cost for the twelve months program was to be \$23,000 (26). A Fact Sheet was developed giving information regarding Oregon wheat. These Fact Sheets were sent to the newspapers in the state. A limited amount of advertising space was purchased from the two daily newspapers in Portland and also in out-state dailies and weeklies, and editorials were developed by the advertising agency to be inserted in the advertising space that had been purchased. Newspaper space was purchased

for use by the Wheat League's home economist (Taylor, 27). News releases were issued on various subjects of current interest and importance. For example, there were releases on an Oregon Strawberry Shortcake campaign; on wheat legislation; on an International trade fair at Osaka, Japan; and on a Wheat Market development program in Japan. Releases were issued on other topics also (27). The administrator (27) said:

The results of our Public Information Program have been quite gratifying. During the first four months of the program, 651 news stories actually appeared in newspapers. During the second four months, 601 newstories appeared. We have gotten three news stories (without cost) for every ad that has appeared. The advertising agency reports that the support we are now enjoying from the newspapers of this state is solid and continuing and that there is no lull after the kickoff activities of our program.

Following is a short summary of the use the League has made of its home economist. The summary was included to give a specific example of why it would be wise for the commission to test the financial returns from its projects.

To help increase the demand for wheat, Frances Fields, the Oregon Wheat League home economist, was hired to prepare news releases on wheat foods, and write columns which have been run as advertisements. For example, one column, titled, "Good Breakfasts mean Good Mornings," and apparently written to run in March, remarks that there is "no better way to brighten up Lenten meatless meals than with nourishing, tasty rolls and coffee breads." It gave a recipe for Danish Pastry, which was to be made with, among other things, $4\frac{1}{2}$ cups of enriched flour. Closing remarks include, "for just 1/10 of your family's food dollar you get 1/4 of your family's daily food requirements with wheat foods." The commission said (28) that it employed the home economist to "sell more wheat at home" as a "revival of home baking—becoming a lost household art in many urban

homes—is one of the best ways of reversing the steady downward trend in per capita wheat consumption," and the home economist was employed to "keep alive the knowledge of home baking in Oregon homes." While considering the type of promotion the above project involves, the following study noted in Klineberg (14) should be considered:

In a series of important studies Lewin and his associates compared the effects of group decision and lectures or individual instruction in changing food habits. In a first experiment the objective was to increase the use of beef hearts, sweetbreads, and kidneys. The subjects included three groups of housewives, thirteen to seventeen in each group, who were given 45-minute lectures which emphasized the vitamin content and the mineral value of these meats, the techniques by which they could most appetizingly be prepared for the table, etc.; a follow-up showed that three per cent of the women in these groups later served one of these meats in their own homes. Another three groups of similar size spent the time in a group discussion of the problems faced by 'housewives like themselves,' with the nutrition expert answering questions as they arose instead of presenting the material in lecture form. Thirty-two percent of these women later made use of one of the meats discussed. Group discussion and decision evidently resulted in a much greater degree of ego-involvement, with a more marked effect on behavior as a consequence. In a second investigation, involving the increase of home consumption of milk, group decision again resulted in a much greater change than did a lecture, and the increased consumption persisted during a four-week follow-up period. In a third study, group decision was compared with individual instruction of farm mothers regarding the use of orange juice and cod-liver oil in the care of their children; the group decision method proved far superior, and again the superiority persisted over a four-week period.

While the results of the above cannot be transferred directly to test the results of the promotional activity of the Oregon home economist, they do point out the advisability of conducting consumer surveys to see how many housewives read the column, how many of these readers do use the recipes, and therefore, how much additional wheat is sold. In the study above, only three percent of the women lectured to make use of the product advocated. If the same is found to hold true in the case of wheat, then

no more than three percent of the readers of the ad made use of the recipe. It seems likely that a consumer survey would show that any increase in demand for wheat because of the advertisement would not be sufficient to justify the cost of preparing and running the advertisement.

The Advertising of Wheat in Nebraska

A program, similar to that adopted in Oregon, was first advocated in Nebraska in 1950 by a wheat growers organization which was then known as the Nebraska Wheat Research Foundation. A bill was drafted and presented to the 1951 session of the Nebraska Legislature and was passed by the Legislature. However, it was vetoed by the Lieutenant Governor while the Governor was out of the state. The Legislature then passed the bill over the Lieutenant Governor's veto and the Supreme Court declared the bill unconstitutional because it provided for a refund provided the farmers requested it. In 1954 the Nebraska Wheat Growers Association was organized and the group played an active role in laying the groundwork for getting a bill introduced in the 1955 session of the Nebraska Legislature. The bill, known as L. B. 518, was passed by the Legislature and signed by Governor Victor E. Anderson. The act, known as the Nebraska Wheat Resources Act, went into effect September 18, 1955 (Sheffield, 25).

The Act provided for a two and one-half mill (one-fourth cent) a bushel tax upon all wheat grown in Nebraska and sold through commercial channels; for establishment of the Division of Wheat Development, Utilization and Marketing, an agency of state government under the Department of Agriculture and Inspection and for the creation of a Nebraska Wheat Commission of seven growers appointed by the Governor to formulate the

policies, direct the activities of the Division, and to decide how the funds collected should be spent (1). Leslie F. Sheffield was appointed chief of the division March 1, 1956, the date the division opened its office (1). The 7-member commission meets at least once every three months to consider the business of the division and decide the allocation of the wheat excise tax funds to various projects and activities (1).

The division has separated its activities into three categories--wheat development, wheat utilization, and wheat marketing. Although this study is concerned with the third category only, brief mention will be made of some of the activities in the first two categories.

For the study of the inheritance of protein in wheat, a \$2,200-a-year grant for an estimated 5-year period has been provided to the Nebraska Agricultural Experiment Station (1). For the study of cutworms attacking wheat, an \$8,500-a-year grant for a 5-year period has been provided the experiment station. For studies on chemotherapy of diseases caused by rust, a grant of \$10,450 for one year, and \$5,000 a year for the next three has been made to the experiment station (1).

Under utilization, a project to determine feeding value of wheat is being carried on at the Nebraska Agricultural Experiment Station at North Platte and is to cover a 3-year period. The cost for the first year was \$6,000 and the broadened study is to cost \$10,000 annually for the last two years (1). Also under utilization, the division maintains contact with the Presidentially appointed Bi-Partisan Commission on Increased Use of Agricultural Products.

The section of the report (1) devoted to marketing, includes the following statement:

In cooperation with the Nebraska Grain Improvement Association, the Nebraska Wheat Commission has made it possible to step up by threefold the advertising of Nebraska wheat and flour in leading milling and baking trade journals.

The first in this series of joint ads on the high quality of the 1956 Nebraska wheat crop is underway in the leading milling and baking publications. This joint effort should benefit Nebraska growers and the state's wheat industry through increased domestic markets for the state's wheat.

The division and the Nebraska Wheat Commission worked out a wheat market development program in cooperation with the Foreign Agricultural Service of the U.S.D.A. A 7-member Italian delegation was given a 10-day tour of Nebraskan wheat producing, marketing, and processing facilities during October 1956. The commission and the division made arrangements for the delegation to tour Kansas and Oklahoma. The project was intended to convince the delegation that hard red winter wheat is a high-quality wheat which can be successfully blended with the limited supplies of Italian durum wheat for its macaroni and spaghetti manufacture (1). A similar market development project for Greece was underway to take place in April or May of 1957 with emphasis on how hard red winter wheat can be successfully blended with Greek supplies of soft wheat in bread production.

A project to provide for a travelling wheat marketing exhibit was approved in cooperation with the Nebraska Agricultural Extension Service. The project will cost an estimated \$2,000 a year (1). A cooperative arrangement was worked out with the Wheat Flour Institute and the American Bakers Association whereby their educational publications could be purchased at cost for distribution to groups and education agencies in Nebraska (1). Potential projects in cooperation with the Wheat Flour Institute and the American Bakers Association to provide accurate and informative facts on the use of wheat and wheat products in all menus,

including reducing diets, were to be planned and checked (1). Work was underway to establish a project to study the transportation costs of wheat and wheat products to determine the effect on both domestic and foreign markets for Nebraska wheat. The Nebraska Wheat Commission authorized up to \$2,500 for the 1956-57 fiscal year to get the project started; however, total costs and length of the study are to be revised later as the project develops (1).

The Division has engaged in a public information project to explain to farmers how wheat tax is being spent. Several news releases about the division, its program, and its activities were sent out to press, radio, and T.V. media in Nebraska (1). A special article on the Nebraska Wheat Commission and the Division was written for the July 21, 1956 issue of the Nebraska Farmer (1). Two folders were prepared to provide information about the program. The first folder was titled "How Nebraska's Grower Supported Wheat Program Can Help Increase Our State's Income" while the second folder was a reprint of the article on the commission which appeared in the Nebraska Farmer. More than 14,000 copies of the first folder and 12,000 copies of the second folder have been distributed (1). The Nebraska Wheat Commission approved a series of six monthly advertisements that appeared in the Nebraska Farmer which were intended to inform farmers about the division and how the wheat tax funds were being used. They appeared July 21, August 18, September 15, October 20, and November 17, 1956; and January 19, 1957 (1). The Nebraska Farmer reaches 98 of 100 Nebraska farm homes according to the publisher (25).

Some of the following statements, which appeared in commission pamphlets and advertisements, are an indication of the philosophy under which the commission is operating:

Nebraska wheat growers have an advantage over those in other areas because Nebraskans raise a high protein strong gluten wheat which commands premium prices from flour millers. Nevertheless, the basic problem remains. For a more prosperous agricultural economy in Nebraska, the market for wheat must be expanded. It CAN be expanded: By developing, through research, still better varieties of wheat.... by persuading more millers to use more of Nebraska's premium wheat.... by encouraging the consumption of more wheat products of all types.... by developing new uses for wheat.... and by promoting better foreign markets. That is the task that Nebraska wheat growers, believing in self-help, have undertaken through the Nebraska Wheat Commission. The Commission's three-pronged program, embracing research and development, utilization, and marketing, is a proven tool that has been used successfully by the nation's citrus growers and dairy farmers. It can pay rich dividends, (11).

Other groups have accomplished a great many things by self-help and there is no reason why Nebraska's wheat growers cannot benefit from a similar grower-supported wheat program (12).

Nebraska's wheat program can mean increased demand, wider markets and increased—or at least—stable prices for all Nebraska wheat growers (22).

Following is a financial statement that was a part of the Annual Report of the Division. Attention is called to the more than \$117,000 on hand as of October 31, 1956, which indicates that the accumulation of funds at that time was far outstripping the costs of the projects so far developed.

Financial Statement of the Nebraska Wheat Commission

Receipts, Wheat Excise Tax, September 18, 1955 through June 30, 1956
 \$71,486.12

Expenditures, September 18, 1955 through June 30, 1956

1. Personal Services	\$ 5,633.93	
2. Operation Expense	4,234.41	
3. Supplies	1,395.15	
4. Maintenance and Supplies	None	
5. Properties and Public Improvements	2,188.79	
6. Fixed Charges, State Aid	<u>651.50</u>	
Total Expenditures		<u>14,103.78</u>
Balance on Hand, July 1, 1956		\$57,382.34

Fiscal Year 1956-57*

*(Preliminary Figures)

Receipts, Wheat Excise Tax, July 1, 1956 through
 October 31, 1956 \$84,799.93

Expenditures, July 1, 1956 through October 31, 1956

1. Personal Services	\$ 5,091.98	
2. Operating Expense	3,487.35	
3. Supplies	1,581.89	
4. Maintenance and Supplies	5.50	
5. Properties and Public Improvements	354.60	
6. Fixed Charges, State Aid	440.00	
7. Promotional Folders, Advt. and Exhibits	3,420.43	
8. Projects—Development, Utilization and Marketing	10,396.61	
Total Expenditures (July 1, 1956 - October 31, 1956)		<u>\$24,783.36</u>
Balance (Receipts minus Expenditures, 1956-57)		\$60,017.57
Balance on Hand (July 1, 1956)		<u>\$57,382.34</u>
TOTAL FUNDS ON HAND (October 31, 1956)		\$117,399.91

The Advertising of Wheat in Kansas

The 1957 Kansas legislature passed an act for the development of industries and markets based on wheat, effective as of April 1, 1957. The law created a 7-member commission and established a two-mill-a-bushel tax on wheat marketed through commercial channels in the state.

Six of the members of the Kansas Wheat Commission are to be appointed from six districts of the state set up by the Act and the seventh at large. All members are to be appointed by the governor for terms of two years each (except that three of the first appointments are to be for one year). Among other qualifications, commission members must have been actually engaged in growing wheat in Kansas for at least five years.

Among commission activities as outlined in the Act, are to be the following:

To conduct a campaign of development, education and publicity; to find new markets for wheat and wheat products; to appoint an administrator and such other personnel as is needed, and to prescribe their duties and fix their compensation.

The 2-mill tax is to be levied and assessed to the grower at the time of the first sale of his wheat with collections to begin June 1, 1957. Any grower can obtain a refund of the tax if he makes application within ninety days after any sale. Of the collected taxes, the Act provided that twenty percent of all such money is to go to the general fund of the state and the remaining eighty percent to the commission to be used to carry out the provisions of the act.

An approximation of the amount of money that will be available to the commission to conduct its campaign of development, education, and publicity can be gained by referring to Table 2.

Table 2. U. S. wheat production (in 000 bushels)

State	indicated 1956	1955	average 1945-54
Kansas	144,600	128,385	202,873
Nebraska	60,211	78,255	80,211
Oregon	25,828	21,899	26,804

A 2-mill tax on a normal year's production of about 200 million bushels would raise about \$400,000. Eighty percent of this would leave the Kansas commission with an indicated yearly budget of \$320,000. Because of the soil bank and adverse weather conditions the indicated crop for 1957 is about half the 10-year average or 100 million bushels, which would give the commission about \$160,000 to finance its first year of operation. This makes no allowance for refunds, as the amount which will occur is impossible to estimate. A similar law in Nebraska was declared unconstitutional because of a similar refund clause. It appears that the Kansas Wheat Commission will have a very large sum of money at its disposal, and in view of the surplus funds now on hand in Oregon and Nebraska, it may find itself troubled with a problem that does not beset many state agencies.

A SHORT DISCUSSION OF THE EFFECTS OF AGRICULTURAL RESEARCH

While it is not possible in this study to investigate the merits of research, inasmuch as research, study, education, and publicity were tied together by the same law in Oregon, Nebraska, and Kansas, the following has been noted.

It seems only fair to point out to farmers who are, through a tax on the wheat they sell, helping pay for research being done in the hope that it can improve their financial position, what Boulding (4) said on this issue:

We have therefore a strange paradox, that labour-saving techniques in agriculture are of supreme importance to society at large but are a distinct source of embarrassment to agriculture itself. The fruits of our scientific farming and our agricultural colleges are found on the tables of the masses, not in the pocketbooks of the farmers. A relatively prosperous agriculture is a sure sign of economic retrogression: witness, for instance, the movement back to the farm during the depression, or the agricultural prosperity which vulture-like fattens on the distress occasioned by a great war. Agriculture will be most prosperous in a society in which agricultural techniques are stagnant or declining, and in which industrial techniques are advancing rapidly, for after all, the greater part of the real income of the farmer consists of the product of industry.

The above¹ is not meant to be a criticism of agricultural research, but was included because of the close tie that has been made between agricultural research and advertising in Oregon, Nebraska, and Kansas. Here, perhaps is a valid reply (for farmers who are supporting agricultural research through a tax on their own products) to critics who constantly accuse agriculture of always being on the receiving end of society.

A SHORT REVIEW OF ADVERTISING CAMPAIGNS TO INCREASE THE DEMAND FOR SELECTED FARM PRODUCTS

A short review of a few past advertising campaigns that were undertaken to increase the demand for farm products was made to show some of their implications toward the wheat industry. A detailed study of the

¹One paragraph can not do justice to Boulding's article; he continues for example, by saying that, "the moral of this argument is not that we should abandon agricultural research, burn our agricultural colleges, and go back to scrabbling the ground with a stick, though a strong pursuit of 'justice to agriculture' might lead us to this alarming conclusion.... the economic answer to agricultural poverty is mobility; the easier the agricultural progress, the less unattractive will agriculture have to be relative to industry in order to accomplish the object of the relative unattractiveness—to drive resources out of agriculture."

field of advertising was made by Borden (2) and (3), who considered advertising's effect on such varied products as tobacco, sugar, dentifrices, shoes, and mechanical refrigerators. A short summary of his studies of tobacco, oranges, and sugar is included below, as well as a short review of studies of advertising campaigns for milk and eggs.

The Advertising of Tobacco

Borden (2) said that "probably no single industry provides more conflicting statements regarding the economic effects of advertising than does the tobacco industry." During the 75 years preceding his study, tobacco products were one of the most intensively advertised of all products. Information indicates a range of advertising expenses from approximately 6 percent to about 30 percent of sales. While this advertising was being made, annual consumption of tobacco steadily increased from slightly less than three pounds per capita in 1870 to more than 5 pounds in 1900, and on to a World War I peak of nearly 7 3/4 pounds in 1917. After that, until World War II, it was relatively stable at around seven pounds, although it dropped temporarily to six pounds in 1933 (2). Other factors beside advertising had an effect on this rise. For example, had not the harsher tobaccos of the pre-Civil War period been replaced with milder tobaccos, such an increase in consumption probably would not have occurred. However, it should be noted that increased consumption of tobacco products up to the first World War was not aided by decreasing prices (2). Since the advertising campaigns carried on were not for bulk tobacco, but rather for retail tobacco products, cigarette and cigar advertising will be noted below.

The Advertising of Cigarettes

Cigarette consumption per capita grew from practically nothing in 1870 to 1,258 in 1937. Advertising played an important part in this growth, but other factors were also very important. In the late 1800's both the introduction of a cigarette-making machine and the lowering of an internal revenue tax on cigarettes served to cut costs (2). For example, although advertising campaigns of testimonials, stressing well-known personages and the picturing of the "right" kind of people smoking, have undoubtedly had an influence in breaking down the social prejudice from which tobacco has suffered ever since its introduction, there are many other reasons for this change in public opinion such as war, which above all other forces, tends to do away with social restrictions upon personal behavior. And our present living conditions tend to favor a short smoke rather than a more leisurely one (2). The rapid increase in smoking by women since Lucky Strike in 1927 first campaigned directly to women and featured women as smokers, is a social revolution. Although advertising has been credited with accomplishing the change, it would be more nearly accurate to say that advertising spread from thousands to millions and tens of millions of women the custom of smoking, which spread from European to American women during the first World War and then quietly and often secretly gained a foothold here (2). Advertising's most important role in the cigarette industry, perhaps, is in establishing brand preference; as Borden (2) said, "advertising is the all-powerful weapon in the building of selective demand. The three leading brands built their domination largely through the use of advertising."

Borden (2) said that:

The large sums devoted to cigarette advertising may in recent years be deemed as much an effect of increased consumption as a cause of it. Tobacco manufacturers have centered their advertising expenditures on this product because business management knows that advertising and aggressive selling are more profitable for a product enjoying a favorable trend than for one operating with an adverse trend. A report on the advertising of the American Tobacco Company, for example, shows that it has concentrated its advertising largely on Lucky Strike cigarettes, although it produced approximately 500 other lines....certain items were reported to give greater margins than cigarettes, but in view of the fact that they were being sold to a shrinking market they were not heavily advertised because President Hill is credited with 'never bucking a trend'.

The Advertising of Cigars

While the sale of cigarettes was climbing to new heights, the demand for cigars was declining. Between 1870 and 1907, per capita consumption of cigars rose from 29.5 to 86.4, but from then on it dropped steadily, hitting a 1933-low of 36.5 before making a small recovery to a more recent consumption of a shade over 40 per capita (2). So, in the face of decreasing prices of cigars and a shift toward low-price cigars, per capita consumption fell more than one-half, while per capita consumption of cigarettes rose more than fourteen times. This fall in the demand for cigars cannot be attributed to a failure by the industry to continue its advertising (2). For example, early in this century when the "Tobacco Combination" was trying to build a dominating place in the cigar business, heavily expenditures for advertising were made by the combination without greatly improving its position in the cigar industry (2). "During the 1920's when demand had a persistent down trend, advertising was apparently still following the pattern employed in the years before 1907, when cigar sales moved ahead persistently (2)."

It is true, of course, that cigars have lost ground to cigarettes during a time when cigarettes have had increasing amounts of advertising devoted to them. But it must be remembered that the increasing volume of cigarette advertising has been possible largely because favoring fashion trends have brought increasing cigarette consumption. Conversely, cigar advertising has been arrested because the fashion trend operating against cigars has reduced sales revenue. Manufacturers have not been able profitably to spend increasing sums.

The contrast of the effect of advertising on the demand for cigars in comparison with the demand for cigarettes reveals one of the most important facts about advertising—that it can accelerate and expand an upward demand trend, arising from social forces, but it does not stop a downward trend, even though it may hold back the speed of the descent (2).

The Advertising of Sugar

Considering sugar advertising, Borden (2) said that, "The first important fact to note is that advertising has played no appreciable part in the remarkable growth of sugar consumption during the past century." Much of this growth occurred before even a modest amount of consumer advertising was undertaken. There was practically no advertising until 1900 and since then the amount of sugar advertising has been too small to have had any real effect upon consumption. Since sugar directly satisfies an elementary taste sensation, as technological developments brought lower sugar costs and as consumer incomes rose, it was to be expected that consumers would increase their consumption of sugar on their own initiative (2). Before 1927, the amount spent for sugar advertising was small and was carried on by refineries for their individual brands. The only big over-all campaign to advertise sugar as such was set off by a campaign against sugar that became too important to be ignored. The slim figure had become the fashion and sugar was attacked as being too fattening. The Sugar Institute launched a heavy counter-attack with

advertising in a program laid out to run for a 5-year period. Substantial expenditures were made for only three years--1929, 1930 and 1931 as the advent of the depression and decreasing emphasis upon dieting and the slim figure led to the decision to reduce the program and finally to discontinue it after 1933 (2). Borden (2) said that:

From case histories of five refining organizations and from discussions with sugar brokers it is clear that advertising has had a relatively small effect in guiding selective demand. It has produced no brand preference strong enough to bring a differential in price to the advertised brands, as has been true of the other products studied....It should not be inferred, however, that brand is meaningless in the selling of granulated sugar. In certain communities we found evidence of brand preference.

The Advertising of Oranges

The California Fruit Growers Exchange, has successfully applied advertising to citrus fruits in efforts to secure a return to its producer members. The first advertising expenditure by the Exchange was made in 1907, when \$10,000 was used for advertising, with the understanding that the Southern Pacific Railroad Company would spend a like amount. A total of \$7,000 spent on advertising Exchange oranges in Iowa that year resulted in sales 50 percent greater than sales in Iowa the year before. In 1908 a total of \$25,000 for advertising was authorized, and the Sunkist brand was adopted, (2). Exchange advertising expenditures have since amounted to more than \$58,000,000 (6). While discussing the effects of advertising upon the primary demand for oranges, other factors such as a general change in diet attitudes, increased purchasing power, improved facilities for bringing goods to market, and a decreasing price structure for oranges, must not be left out. "Nevertheless, the resourceful and persistent advertising and promotion, begun by the California

Fruit Growers Exchange in 1907, has played an important part in the increase of orange production from 2,000,000 boxes a year in 1909 to almost 80,000,000 boxes. The large crops produced would probably never have been moved, even at the decreasing prices, had not consumers' desire for oranges increased over the years," (2). The year before the Exchange began advertising, the per capita orange consumption was 31. In 10 years it was 43; in 20, 52; in 30, 79 (2). The California Fruit Growers Exchange also has benefited from its program from the standpoint of selective demand. Over a period of years the average wholesale prices a pound for competing California and Florida oranges in the New York market shows California navels moving at 5 1/2 cents and Floridas at 4 1/10 cents. While this difference may be accounted for in part by the fact that the two oranges are not identical in flavor, it appears safe to conclude that the consistent advertising by the Exchange has been a factor of considerable importance in establishing consumer preference (2).

The Advertising of Milk

A study in Memphis, Tenn., indicated that promotional efforts were helpful in obtaining maximum milk sales. In 1953, milk sales there were seven percent higher than the year before. A study by the U.S.D.A. found that from October, 1950, to September, 1952, the average price of milk increased about four cents a quart and retail sales of fluid milk dropped eighteen percent. Starting in October 1952, fluid milk prices decreased about four cents a quart by March. During this period of price decline the milk producers and handlers conducted a stepped up advertising promotional campaign. A number of merchandising changes occurred such as the elimination of price differentials between homogenized and regular

milk and between glass and paper containers. Sales increased; by March 1953 they were greater than 1952; this upward trend continued throughout 1953.

For a seven day period in 1953, the families interviewed were using about one quart more of fluid milk than they had the previous year. This increase in milk sales apparently was not due solely to the price declines for many homemakers did not know that prices had dropped but they were aware that a promotion program was on (McNabb, 18).

The Advertising of Eggs

Market sales before and after an advertising and promotional campaign for a special brand of eggs were compared in a study of the demand for eggs in Ithaca, New York. In general, sales of the special eggs were increased considerably by advertising and promotional activities.

This example indicates that advertising and promotional activities were effective in increasing the sales of the special brand of eggs. However, since there was a regular increase in sales before advertising was undertaken, it is probably that the program served the purpose of hastening the attainment of the maximum market for the eggs at various premiums. The evidence available indicates that the increased sales of the special eggs did not result in an increase in total egg sales, but rather, that consumers bought the special-brand eggs instead of others (7).

A SHORT REVIEW OF SOME FOOD PREFERENCES OF CONSUMERS

It must be remembered, when considering these studies, that farm products do not fall into one similar group just because they are foods. Consumers prefer some kinds of foods to others and given sufficient incomes, they will purchase the kinds of foods they want. Advertisers of specific foods have a much greater chance of success if they can appeal to these wants.

While the most important factor affecting the consumption of farm products is income, the outlay for wheat products changes but little with changes in income (Brunk and Darrah, 7). This is shown by a "luxury index," or by income elasticity. When incomes double, for example, food expenditures are increased an average of 54 percent. This "54 percent" has been termed "luxury index" (7). Luxury indexes for a few items are shown in Table 3.

Table 3. Luxury indexes of selected products

Item	Luxury index
All items of consumer outlay (incomes)	100
Food	54
Tobacco	73
Recreation	142
Savings	342
Wheat Products, all incomes	1
Low income	10
Medium income	-3
High income	-2
Vegetables	36
Eggs	36
Meats	44
Dairy Products	62
Bottled milk	102
Cream	204
Fruit	79
Oranges	134

Luxury index indicates two things. First, it shows the degree of change in expenditures resulting from a change in income. The higher the luxury index, the greater the response to income change, and the lower the index, the smaller the response. Secondly, the higher the luxury index, the greater the degree of luxury. That is, a product with a high index will not be in general demand until products that are less luxurious (with a lower index) have been supplied (Brunk and Darrah, 7).

A SHORT DISCUSSION OF THE PRESENT SITUATION OF THE WHEAT INDUSTRY

An investigation of the wheat industry was made to show some of the factors potential advertisers should consider as to the effect they will

have on any advertising campaign to increase the demand for wheat.

That the present situation of the United States wheat industry is one of surplus is obvious. Less obvious perhaps, are the many factors which brought about this situation, the effect of surpluses on prices, and the possibilities and limitations of policies designed to change this situation.

While it is outside the scope of this study to detail the inter-relationships between tariffs, wars, politics, and other factors that brought about the present wheat surplus, a short discussion has been made to indicate that surpluses are not apt to disappear overnight and therefore, the following statement by McKinsey (17) should be given serious consideration by any wheat advertiser:

It seems that the mere existence of these stocks (of a surplus commodity) is contributing to a lower and lower level of farm prices. There has been much talk, and some action, to so insulate these surpluses from the market that they cannot effect the price. No such scheme has yet been developed. So long as they are in existence and available for sale at some price, that price becomes the ceiling price for that commodity.

Wheat is grown in many parts of the world. Some sectors, such as the United States grow more than is needed domestically and export to sectors where supplies of wheat are less than is needed. Wheat prices on the world market when unregulated by governments follow the laws of supply and demand. With much of the world's population living below or near a subsistence level, there are few, if any, reasons why almost all wheat would not be purchased to be eaten if it were to be offered at a low enough price, even with present barriers to international trade.

However, as far as the United States is concerned, at least, agricultural legislation here during the past few decades has shown that the

price that has been offered by an international market for excess American wheat was considered too low to provide wheat farmers with an income that was considered satisfactory when compared with other segments of our country and their incomes. Price supports were the result, McKinsey (17) said, and

...under the price support programs as we have known them in recent years, American farmers have been willing to produce, and indeed have produced, more agricultural products than consumers in this country and other parts of the world have been willing to use at the prices which they would have to pay.

Another reason for these surpluses is that although the number of acres planted to wheat has been restricted the supply of wheat from given acres of land and from given numbers of farmers has increased. Forty years ago it required 106 man hours to produce 100 bushels of wheat; now the same amount can be produced with 26 (17). Increased use of fertilizers, introduction of improved varieties of wheat, mechanization, irrigation, all have contributed to the surpluses of wheat and other foods. "Whereas the average farm worker produced food and fiber for himself and about eight other persons in 1910, today he can provide for 25 others" (17). It is true that per capita demand for wheat in the United States has been falling as is shown in Table 4 and Fig. 3. However, a rising population has caused the total demand to remain about the same. Surplus stocks of wheat can be stored, destroyed, exported, or consumed directly, or indirectly at home.

The U. S. has been using a method of subsidizing to cause a part of the U. S. surplus wheat to be exported, made necessary because the supported price in the United States is far above the world market price.

A rough idea of market conditions can be obtained by comparing prices at New York and Fort William, Canada. Since 1940, the New York price has averaged 51¢ higher than the Fort William price. It does not cost 51¢ a bushel to get wheat from Fort William to loading ports on the eastern seaboard of Canada or the United States (Miller, 20).

As has been explained, expenditures are now being made by at least two states for market promotion aimed at increasing foreign demand for American wheat. As long as surpluses do exist in wheat exporting countries, as is now the case, the possibility of increasing the price for U. S. wheat or even for wheat from a particular state by foreign market promotion seems very remote. However, if a potential wheat advertiser is convinced that such can be done, he must also consider how he hopes to recover the benefits that he has caused to occur. For example, if the result of increasing the quantity sold (and/or price of American wheat or wheat from a particular state) results only in the lowering of the export subsidy, the return to the farmer (who paid for the advertising that caused this increase in demand) in terms of lower taxes obviously would be less than his costs. The possibility that a particular state could promote its wheat sufficiently to sell it on the foreign market at a price above the U. S. domestic market price is very remote indeed.

To increase domestic consumption of wheat, the following are possibilities: (1) per capita consumption can be increased, (2) per capita consumption can be kept the same while population increases demand, (3) wheat can be fed to livestock to be converted to other food products.

Considering the third possibility first, it can be said that the livestock industry is in a different position than is the wheat industry as livestock products are foods that people want and are eating more of. It is generally agreed that the livestock industry converts about seven pounds of dry matter in feed into one pound of dry matter in meat, milk, and eggs (18). "If we were to take our present surplus feed grains and convert them to livestock products, the volume of meat, poultry, and eggs would be about 2 percent more per year" (McNabb, 18). But;

"Prices of average grades of wheat are held far above their value as livestock feed by means of government price support activities,"(8).

Advocates of wheat advertising apparently feel that the second possibility will not occur soon enough, leaving the first as the possibility which wheat advertisers hope to make a reality.

Per capita consumption of wheat has been falling. The total consumption of wheat for food in 1954 was 475 million bushels, about the same as it was in 1909, although the population increased from 90 million in 1909 to 162 million in 1954. However, as is shown in Table 4, per capita consumption of wheat is still at recommended levels and advertisers who hope to increase per capita consumption may find serious opposition from nutritionists as Mangel (19) noted:

Over the past 45 years the pattern has been changing in the direction of increased food consumption of all food groups except flour and other cereal products and potatoes. We are consuming more meat, milk, eggs, fats, sugars, fruits and vegetables than formerly. Consumption of all of these foods is equal to or above recommended levels except in the case of milk, green leafy and yellow vegetables and potatoes. Flour is still being consumed at about the recommended levels but potato consumption has dropped to considerable less than recommended. On the basis of current recommendations, then, we could encourage the use of more non-fat milk solids and green leafy and yellow vegetables and potatoes.

The usual recommendation of the proponents of the "Let's eat up our surplus" plans is that we feed more grain to livestock and encourage people to eat more animal products. From the point of view of food surpluses, this may be a practical solution since the food value we get from the animal is much lower than that of the feed these animals consume. Such animal products are high in acceptance and nutritive value. The production of meat, milk and eggs is more or less profitable to the producer. The nutritionist would not, however, be willing to recommend increased use of these foods without some proof that the result would be beneficial or at least not actually harmful. We have at present a very incomplete picture of the relation between food, nutrition, and health under the many real life conditions existing today. We have very little research of food intakes more than a little higher than minimum

levels. This problem of having too much food on a national scale is a new one.

An increasing proportion of people in this country is overweight. It is pretty well agreed that this condition is undesirable.

From the nutritional point of view, we cannot promote or back nutrition programs which urge higher levels of food intake than are recommended at present without further study of the effects of such programs. We would not want to get rid of surpluses at the expense of the health of the people.

Table 4. Consumption in pounds, retail weight of selected foods.

FOOD GROUP	Apparent		Recommended	
	1910	1954	LOW INCOME	MODERATE INCOME
Meat, Poultry, Fish	150	168	104	143
Eggs (number)	293	402	260	365
Milk and Products except Butter	398	537	559	559
Flour, Cereals	292	156	170	130
Potatoes and Sweet Potatoes	213	107	156	130
Dry Beans, Peas, Nuts	16	17	13	6.5
Leafy Green and Yellow Vegetables	63	102	117	182
Citrus Fruit and Tomatoes	59	108	104	130
Other Fruit and Vegetables	246	218	91	182
Fats and Oils including Butter	59	65	39	45
Sugar and Syrups	87	104	39	45

The decline in per capita consumption of wheat as shown in Table 4 and Fig. 3 continued last year. U. S. consumption of wheat flour was 119 pounds per capita in 1956, about 2 percent less than in 1955 and about 3/4 as much as prewar (Rose, 23), while the U. S. wheat supply for the 1956-57 marketing year was indicated at 2,015,000,000 bushels which was a new all-time record. Included were 1,030,000,000 bushels of carry-over stocks,

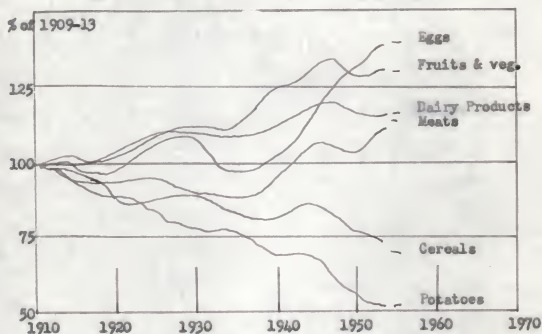


Fig. 3. Trends in our eating habits shown by per capita civilian consumption.

about four times as much as in 1952 (23). The 1956 U. S. crop of 975,517,000 was 4 percent more than in 1955, but 15 percent less than the 1945-54 average (23). Domestic consumption was expected to continue at about 600,000,000 while exports of 415,000,000 were forecast as compared with 345,000,000 bushels in the year ending July 1, 1956, which would mean a moderate reduction in surpluses (23).

SUMMARY AND CONCLUSIONS

In this study, the following assumptions were made: (1) Market promotional activities, such as advertising to increase the demand for wheat are undertaken to obtain a financial return above all additional costs, for the individuals who finance the campaigns through a tax on the wheat they grow; (2) projects of wheat research and utilization are undertaken to realize a financial return above all costs for the individuals financing the projects; (3) if these campaigns and projects are profitable to those paying for them, they should be continued; if they are not profitable, they should be discontinued.

As has been indicated, research and development of wheat in a freely competitive market, apparently will not be profitable to wheat growers as an industry group, although certain individuals may profit. If wheat growers are financing this research jointly, they are defeating their own end, and promoting consumer goals, again under the assumption of a free market. A discussion of the merits of research is outside the scope of this study, but the above has been noted because research and market promotion have been tied together by laws in three states.

This study has shown, (1) that advertisers appeal to consumer's wants; that these wants cannot be created, although advertisers may point out

wants consumers did not realize they had, (2) advertising has, in certain cases, increased the demand for eggs, milk, and oranges; (3) advertising has failed to halt a falling demand for a product; and (4) price supports place the wheat industry in a position different than that of most industries utilizing advertising.

It is tentatively concluded that on the basis of information now available, and on the basis of the past experience of the advertising industry, that the use of advertising and similar market promotional activities to increase the demand for wheat is unwise from an economic point of view. An analogy exists in that advertising has been unable to halt a falling demand for another product, and the demand for wheat is falling as is indicated by per capita consumption figures. People do not want to eat as much wheat as they once did. Advertising cannot create wants that do not exist. While it is true that advertising campaigns for some food products have been successful, their success is unlikely to be extended to wheat. Wheat is a raw material. Eggs, milk, and oranges are not. Whereas California orange growers, for example, can grow Sunkist oranges and sell Sunkist oranges in New York, Kansas wheat growers cannot sell Kansas wheat, as such, to consumers in New York; New York consumers eat bread, and rolls, and cakes. And, the demand for oranges has been going up. There is a possibility, perhaps, that one particular state might be able to increase consumption of its own wheat by promotional activities. But, even if this occurs, it would not increase total wheat consumption. Yet it provides a basis for promotion by states. The result would be that wheat from one state would be substituted for that from another. States would then advertise defensively to protect their

own market and it seems probable that only the advertising agencies would benefit.

There are methods available to test the results of a particular advertising campaign. Wheat advertisers might wish to set up some such test. For example, an advertising and promotional campaign of Kansas grown wheat might be made in some small region such as a county. Wheat and wheat products could be intensively promoted with billboards, store displays, newspaper, radio, and television advertisements, mailed matter, etc., and per capita consumption before and after the campaign compared to determine if any benefits were gained by the wheat advertisers. Experts in the consumer testing field can set up market testing projects of some such type as this.

It is the tentative conclusion that present available information indicates that from an economic point of view, promotional campaigns, such as advertising, to increase the demand for wheat should not be continued nor should new campaigns be undertaken, unless market research and testing shows that such campaigns can be profitable.

been able to halt a falling demand. Advertising of oranges, milk, and eggs, has in some cases at least, increased demand for these products. Advertising has had little if any effect on the demand for sugar.

The present situation of the wheat industry is one of surpluses. These surpluses place a ceiling on wheat prices. It apparently will be very difficult for a wheat promoter to recover any benefits which he might cause to occur with foreign market promotion. Nutritionists believe that the present per capita consumption of wheat is adequate and may oppose any campaign to increase it either directly or indirectly.

Present available information indicates that from an economic point of view, promotional campaigns, such as advertising, to increase the demand for wheat, should not be continued, nor should new campaigns be undertaken, unless market research and testing shows that such campaigns can be profitable.

ACKNOWLEDGMENT

Asst. Prof. John A. Schnittker, of the Department of Economics and Sociology staff, and the major instructor of this writer, deserves much credit if the writer has succeeded in adding useful information to the field of agricultural economics. He suggested and directed this study, helped secure such necessary information, criticized, edited, and perhaps most important, encouraged.

LITERATURE CITED

- (1) Annual Report.
By division of wheat development, Utilization and Marketing,
Department of Agriculture and Inspection. Lincoln, Nebr.
November 1, 1956. 10 p.
- (2) Borden, Neil Hopper.
Advertising in our economy. Chicago: Richard D. Irwin, 1945.
301 p.
- (3) Borden, Neil Hopper.
The economic effects of advertising. Chicago: Richard D. Irwin,
1942. 988 p.
- (4) Boulding, Kenneth Ewart.
Agricultural policy. The Canadian Journal of Economics and
Political Science, Vol. 8:436-446.
- (5) Boulding, Kenneth Ewart.
Economic analysis. New York: Harper & Brothers, 1948. 884 p.
- (6) Brewster, Arthur Judson, Herbert Hall Palmer, and Robert G. Ingraham
Introduction to advertising. New York: McGraw-Hill, 1954. 490 p.
- (7) Brunk, Max E., and L. B. Darrah.
Marketing of agricultural products. New York: Ronald Press, 1955.
419 p.
- (8) Economic Policy for American Agriculture.
By the research and policy committee of the committee for economic
development, New York: Committee for Economic Development, 1956.
42 p.
- (9) Hattwick, Melvin S.
How to use psychology for better advertising, Englewood Cliffs, N. J.:
Prentice-Hall, 1956. 376 p.
- (10) Hepner, Harry Walker.
Effective advertising, New York: McGraw-Hill, 1949. 728 p.
- (11) How Nebraska's Grower Supported Wheat Program can help increase our
state's income. Pamphlet, Lincoln: Division of Wheat Development, 1956.
- (12) Information About the Nebraska Wheat Commission.
Pamphlet, Lincoln: Division of Wheat Development, 1956.
- (13) Kleppner, Otto.
Advertising procedure, New York: Prentice-Hall, 1950. 775 p.
- (14) Klineberg, Otto.
Social psychology, New York: Henry Holt, 1954. 578 p.

- (15) Lucas, Darrell Blaine and Steuart Henderson Britt.
Advertising psychology and research, New York: McGraw-Hill,
1950. 765 p.
- (16) MacDougall, Curtis D.
Understanding public opinion, New York: MacMillan, 1952. 698 p.
- (17) McKinsey, J. Wendell.
Farm surpluses--what, where and why, University of Missouri
Bulletin 666. January 1956 : 2-9.
- (18) McNabb, Coy C.
Increasing sales through advertising, University of Missouri
Bulletin 666, January 1956 : 29-31.
- (19) Mangel, Margaret.
Can nutrition help remove farm surpluses, University of
Missouri Bulletin 666, January 1956 : 23-26.
- (20) Miller, Frank.
Remove surpluses by increasing foreign trade, University of
Missouri Bulletin 666, January 1956 : 31-34.
- (21) Mott, Frank Luther.
American journalism. New York: MacMillan, 1950. 835 p.
- (22) Nebraska Wheat is Premium Wheat.
Advertisement in Nebraska farmer, July 21, 1956.
- (23) Rose, John Kerr.
Wheat, 1957 Britannica book of the year. Chicago: Encyclopedia
Britannica, 1957: 806-807.
- (24) Settlement.
News story, Newsweek, November 26, 1956, 22:63.
- (25) Sheffield, Leslie F.
Letter to John A. Schmittker, November 30, 1956.
- (26) Summary Prepared for Ontario Meeting.
Oregon wheat commission, June 21, 1956: 25-40.
- (27) Taylor, R. E.
Letter to John A. Schmittker, August 29, 1956.
- (28) Wheat--Oregon's No. 1 Farm Crop.
Oregon wheat commission, 1955. 9 p.

APPLICATION OF THE PRINCIPLES OF ADVERTISING
TO THE DEMAND FOR WHEAT AND OTHER FOODS

by

WILLIAM LEE RUGGELS

B. S., Kansas State College
of Agriculture and Applied Science, Manhattan, 1956

AN ABSTRACT OF A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

This study was initiated to bring together principles of advertising and to consider their application as a means of increasing the demand for wheat. To do this, the field of advertising was examined; past uses of advertising to increase the demand of food products were examined; the present situation of the wheat industry was examined, and the results of these examinations were combined to determine whether advertising campaigns in Oregon, Nebraska, and Kansas, to increase the demand for wheat would be financially successful.

Advertising is not a new development but rather is almost as old as history. Advertising campaigns are undertaken to profitably increase the demand for a product so that its demand curve is shifted above and to the right. There are two kinds of advertisements, product introduction and product competition. Psychology has been applied to advertising and more and more, advertisers are attempting to appeal to consumer's wants.

Wheat advertising and promotional campaigns are now being carried on by Oregon and Nebraska and the 1957 Kansas Legislature made provisions for a similar program in Kansas. Both Oregon and Nebraska have budget surpluses.

Agricultural research will not in most cases directly benefit farmers but rather will benefit society as a whole. Farmers who as a group pay for wheat research to develop new and better producing varieties are not serving their own economic ends, under the assumption of perfect competition.

Advertising of cigarettes has shown that advertising can accelerate a rising demand. Advertising of cigars has shown that advertising has not